

CLAIMS

We claim:

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1. A method, comprising:

- (a) transmitting a packet from at least one client to a deceiver;
- (b) transmitting the packet from the deceiver to a controller;
- (c) routing the packet from the controller to a first server to resolve the packet;
- (d) receiving the resolved packet from the first server back to the controller;
- (e) establishing a connection between the controller and a forwarder;
- (f) processing the resolved packet and storing data from the packet in the controller;
- (g) routing the packet back through the client to the forwarder;
- (h) further processing the packet in the forwarder, where the packet is then transmitted to a second server.

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2. The method according to claim 1, wherein the packet sent from the client contains a request for a domain name resolution.
- 5 3. The method according to claim 2, wherein the packet sent from the client is forwarded through the deceiver to the controller, where said controller subsequently queries a domain name server.
- 10 4. The method according to claim 3, wherein the domain name server resolves the client request, and returns the resolved packet back to the controller.
- 15 5. The method according to claim 1, wherein the packet from the client computer includes a request to resolve an IP address of a website server that the client is intending to reach.
- 20 6. The method according to claim 5, wherein the controller stores an IP address that represents the origin of a client.

7. The method according to claim 5, wherein the controller stores an IP address of the website server that the client is intending to reach.

5 8. The method according to claim 5, wherein the controller stores an IP address that represents the location of the forwarder.

9. The method according to claim 5, wherein the
10 controller stores a time-to-live function for a session.

10. The method according to claim 5, wherein the
processing of the resolved packet includes
15 interchanging the IP address of the website server with the IP address of the forwarder.

11. The method according to claim 5, wherein the
processing of the resolved packet in the forwarder
20 includes said forwarder querying the controller to determine the destination IP.

12. The method according to claim 5, wherein the processing of the resolved packet in the forwarder

includes said forwarder querying the controller to determine the client IP, the deceiver IP and a time-to-live to establish validity of client request.

5 13. A computer system comprising:

(a) a deceiver connected to at least one client to receive/send data, whereby the deceiver misdirects data received from the client back to said client;

10 (b) a forwarder connected to the client and a destination website;

(c) a controller in communication with the deceiver, the forwarder, and a server.

15 14. A computer system according to claim 13, wherein the controller receives data from the deceiver containing destination instruction.

20 15. A computer system according to claim 14, wherein the destination instruction is an IP address of a website that the client is intending to communicate with.

16. A computer system according to claim 13, wherein the deceiver forwards a destination instruction to the

controller, and the controller transmits the instruction to the server.

17. A computer system according to claim 16, wherein the
5 server returns the destination instruction back to the controller.

18. A computer system according to claim 17, wherein the
10 controller extracts and replaces the destination instruction with a misdirected destination instruction.

19. A computer system according to claim 18, wherein the
15 controller stores the destination instruction.

20. A computer system according to claim 19, wherein the
controller transmits the misdirected destination instruction to the deceiver.

20 21. A computer system according to claim 20, wherein the misdirected destination instruction identifies the forwarder as a destination.

22. A computer system according to claim 21 wherein the deceiver forwards the misdirected destination instruction through the client to the forwarder.

5 23. A computer system according to claim 22 wherein the forwarder validates the misdirected destination instruction via the controller.

10 24. A computer system according to claim 23 wherein the forwarder executes the validated misdirected destination instruction to the destination website.

25. A method for communicating through virtual namespaces comprising:

- 15 (a) assigning an ad hoc domain to at least one client with a controller via a deceiver;
- (b) misdirecting client destination instructions through the controller and deceiver;
- 20 (c) validating the misdirected IP queries through a forwarder, wherein the forwarder, controller and deceiver function as the client's domain for the virtual namespace.

26. The method according to claim 25 wherein the ad hoc domain exists for a predetermined period of time.

27. The method according to claim 25 wherein the
5 controller and deceiver misdirect client destination instruction back to the client.

28. The method according to claim 27 wherein data in the
10 client destination instruction is recorded and stored in the controller.

29. The method according to claim 27 wherein the
15 controller establishes communication with a forwarder through which said misdirected client destination instruction is to be routed through.

30. The method according to claim 29 wherein the deceiver
20 communicates the output of the controller to the client.

31. The method according to claim 29 wherein the forwarder
validates the misdirected client destination instruction through the controller

32. A computer program article of manufacture comprising:

- (a) a computer readable medium;
- (b) program means in said computer readable medium for communicating with at least one client;
- (c) program means in said computer readable medium for misdirecting client IP queries;
- (d) program means in said computer readable medium for validating the misdirected client IP queries and communicating data contained in said IP queries to a destination website;
- (e) program means in said computer readable medium for re-validating data sent from said destination website that is intended for the client.

33. A method for misdirecting destination instructions,
comprising:

- (a) receiving a destination instruction from at least one client;
- (b) processing and storing the destination instruction;
- (c) establishing a misdirection destination for said destination instruction;
- (d) transparently transmitting the misdirection destination back to the client.

34. The method according to claim 33, wherein the destination instruction is received by a deceiver;

5 35. The method according to claim 34, wherein the destination instruction is forwarded to a controller;

36. The method according to claim 35, wherein the destination instruction is resolved and processed in the controller.

37. The method according to claim 36, wherein the controller establishes a misdirection destination by communicating to a forwarder.

38. The method according to claim 37, wherein the misdirection destination is the forwarder.

39. The method according to claim 33, wherein the client further transmits data relating to the destination instruction using the misdirected destination instruction.

40. A computer system comprising:

- (a) a processing system connected to at least one client;
- (b) a deceiver communicating with the processing system;
- (c) a forwarder communicating with the processing system;
- (d) a controller communicating with the deceiver and the forwarder, wherein said controller, deceiver and forwarder define a domain through which the client communicates to a network.

41. A computer system according to claim 40, wherein the deceiver and controller define a first part of the domain by directing client activity to a predetermined destination established by the deceiver.

42. A computer system according to claim 41 wherein the predetermined destination is transparently substituted for a client's intended destination.

43. A computer system according to claim 41, wherein the forwarder defines a second part of the domain by

validating the predetermined destination established by the deceiver and controller.

44. A computer system according to claim 40 wherein said at least one client and a network transmit data to each other through the domain.

1. The first part of the paper is devoted to the study of the asymptotic behavior of the solutions of the system (1) as $\epsilon \rightarrow 0$. It is shown that the solutions of the system (1) converge to the solutions of the system (2) as $\epsilon \rightarrow 0$.